

### SUMMARY

A continuous process to oxychlorinate olefins and aromatics is described, comprising the conversion of olefins and aromatics as component (a) with oxygen and hydrogen chloride as component (b) in the presence of a solid cuprous/cupric salt catalyst in a reactor, characterized in that components (a) and (b) are fed separately from each other in spatial terms into reaction zones and regeneration zones of the reactor, where the reaction zone shows a higher concentration of the catalyst in its oxidized form at the solids entry point than at the solids exit point, and the regeneration zone shows a higher concentration of the catalyst in its reduced form at the solids entry point than at its solids exit point, and where component (a) is fed into the reaction zones and component (b) is fed into the regeneration zones.